

NOMENCLATURAL NOTES IN NORTH AMERICAN POTENTILLA (ROSACEAE)

Barbara Ertter

Curator of Western North American Flora
University and Jepson Herbaria
University of California
Berkeley, California 94720-2465, U.S.A.
and
Research Associate
Snake River Plains Herbarium
Boise State University
Boise, Idaho 83725-1515, U.S.A.
ertter@berkeley.edu

ABSTRACT

New Manual of Botany of the Central Rocky Mountains, by J.M. Coulter & A. Nelson (1909) is an earlier source than previously noted for *Potentilla* sections *Supinae*, *Concinnae*, *Subjugae*, *Niveae*, and *Multifidae*. Sections *Rubricaulis* and *Leucophylleae* are also established, with the latter superseding sect. *Hippiana* (Rydb.) Ertter & Reveal. The segregates from *P. pensylvanica* sensu lato that will be used in a forthcoming volume of *Flora of North America* are briefly summarized, with ***Potentilla jepsonii*** Ertter established as a new name for *P. pensylvanica* var. *ovium* Jepson. The distinction and identity of *P. nivea* var. *dissecta* S. Watson and *P. concinna* var. *divisa* Rydb. are clarified. Complete lectotypifications are provided for *P. litoralis* Rydb., *P. pensylvanica* var. *ovium*, *P. nivea* var. *dissecta*, *P. concinna* var. *divisa*, and *P. pseudosericea* Rydb.

RESUMEN

New Manual of Botany of the Central Rocky Mountains, by J.M. Coulter & A. Nelson (1909) es una fuente previa a las tenidas en cuenta anteriormente para *Potentilla* secciones *Supinae*, *Concinnae*, *Subjugae*, *Niveae*, y *Multifidae*. Las secciones *Rubricaulis* y *Leucophylleae* también se establecen, con la última desbancada sect. *Hippiana* (Rydb.) Ertter & Reveal. Los segregados de *P. pensylvanica* sensu lato que serán usados en el próximo volumen de la *Flora of North America* se resumen brevemente, con ***Potentilla jepsonii*** Ertter establecida como un nombre nuevo para *P. pensylvanica* var. *ovium* Jepson. Se clarifican la distinción e identidad de *P. nivea* var. *dissecta* S. Watson y *P. concinna* var. *divisa* Rydb. Se aportan lectotipificaciones para *P. litoralis* Rydb., *P. pensylvanica* var. *ovium*, *P. nivea* var. *dissecta*, *P. concinna* var. *divisa*, y *P. pseudosericea* Rydb.

For a forthcoming volume of *Flora of North America* (FNA), several nomenclatural notes, lectotypifications, and a new name are required for *Potentilla* (Rosaceae); these are provided herewith.

I. Some overlooked sectional names in *Potentilla*

Subsequent to the publication of *Potentilla* sect. *Hippiana* (Rydb.) Ertter & Reveal (2007), a previously overlooked source of validly published sectional names has been encountered that supersedes sect. *Hippiana* and several other sections, at least as far as author attribution. In the key to *Potentilla* on page 255 of *New Manual of Botany of the Central Rocky Mountains* (Coulter & Nelson 1909), Nelson adopts several of Rydberg's unranked "groups" and explicitly refers to them as sections. The nomenclatural results are as follows:

Potentilla* sect. *Supinae (Lehm.) A. Nelson in J.M. Coult. & A. Nelson, *New Man. Bot. Centr. Rocky Mt.* 255. 1909. BASIONYM: *Potentilla* series *Supinae* Lehm., *Revis. Potentill.* 8, 191. 1856.—Antedates Johnston's (*Phytologia* 57:297. 1985) effort to establish the sectional name, but still later than heterotypic *P.* sect. *Rivales* Pöevertl. in *Asch. & Graebn. (Syn. Mitteleur. Fl.* 6(1):669. 1904).

Potentilla* sect. *Concinnae (Rydb.) A. Nelson in J.M. Coult. & A. Nelson, *New Man. Bot. Centr. Rocky Mt.* 255. 1909. BASIONYM: *Potentilla* [unranked] *Concinnae* Rydb., *Bull. Torrey Bot. Club* 23:431. 1896.—Antedates Johnston's (*Phytologia* 57:299. 1985) effort to establish the sectional name.

Potentilla* sect. *Subjugae (Rydb.) A. Nelson in J.M. Coult. & A. Nelson, *New Man. Bot. Centr. Rocky Mt.* 255. 1909. BASIONYM: *Potentilla* [unranked] *Subjugae* Rydb., *Bull. Torrey Bot. Club* 23:397. 1896.—Antedates Johnston's (*Phytologia* 57:299. 1985) effort to establish the sectional name.

- Potentilla** sect. **Niveae** (Rydb.) A. Nelson in J.M. Coult. & A. Nelson, New Man. Bot. Centr. Rocky Mt. 255. 1909. BASIONYM: *Potentilla* [unranked] *Niveae* Rydb., Bull. Torrey Bot. Club 23:301. 1896.—Antedates Juzepczuk's (Fl. SSSR 10:133. 1941) use of the name at sectional rank. *Potentilla* subtrib. *Niveae* Lehm. (Revis. Potentill. 8, 163. 1856) is an invalid name (Art. 33.9 in McNeill et al. 2006).
- Potentilla** sect. **Multifidae** (Rydb.) A. Nelson in J.M. Coult. & A. Nelson, New Man. Bot. Centr. Rocky Mt. 255. 1909. BASIONYM: *Potentilla* [unranked] *Multifidae* Rydb., Bull. Torrey Bot. Club 23:262. 1896.—Antedates Juzepczuk's (Fl. SSSR 10:113. 1941) use of the name at sectional rank, but still later than heterotypic *P.* sect. *Pensylvanicae* Poeverl. in Asch. & Graebn. (Syn. Mitteleur. Fl. 9(1):669. 1904). *Potentilla* trib. *Multifidae* Lehm. (Revis. Potentill. 4, 26. 1856) is an invalid name (Art. 33.9 in McNeill et al. 2006).
- Potentilla** sect. **Rubricaulis** (Rydb.) A. Nelson in J.M. Coult. & A. Nelson, New Man. Bot. Centr. Rocky Mt. 255. 1909. BASIONYM: *Potentilla* [unranked] *Rubricaulis* Rydb., Mem. Dept. Bot. Columbia Coll. 2:30. 1898.—Not previously established as a section.
- Potentilla** sect. **Leucophyllae** (Rydb.) A. Nelson in J.M. Coult. & A. Nelson, New Man. Bot. Centr. Rocky Mt. 255. 1909. BASIONYM: *Potentilla* [unranked] *Leucophyllae* Rydb., Mem. Dept. Bot. Columbia Coll. 2:31. 1898.—Antedates homotypic sect. *Hippiana* (Rydb.) Ertter & Reveal (Novon 17:317. 2007).

II. Segregates from *Potentilla pensylvanica* L. sensu lato

Several entities frequently included within a broadly defined *Potentilla pensylvanica* L. (e.g., Hitchcock & Cronquist 1961, McGregor 1986) will be recognized as distinct species in FNA. The critical nomenclature is briefly summarized here, along with a new name and a lectotypification.

- Potentilla pensylvanica** L., Mant. Pl. 76. 1767. Lectotypification by Fernald (1935: 288) supersedes that of Soják (1987: 298). Excluded from synonymy is *P. pensylvanica* var. *strigosa* Pursh, since the homotypic *P. strigosa* (Pursh) Tratt. has been lectotypified by Soják (1987: 293) on a Pallas specimen (BM) from Siberia, which Soják identified as the hybrid between *P. pensylvanica* and the strictly Eurasian *P. sanguisorba* Willd. In D.F.K. Schltldl.
- Potentilla lasiodonta** Rydb., N. Amer. Fl. 22:351. 1908. An earlier name for *P. finitima* Kohli & Packer (Canad. J. Bot. 54:714. 1976), as first noted by Soják (1994: 77).
- Potentilla litoralis** Rydb., Bull. Torrey Bot. Club 23:264. 1896. TYPE: CANADA. PROV. QUEBEC. Gaspé Co.: Sta. Anne des Monts, 10 Jul 1881, J.A. Allen s.n. (LECTOTYPE, designated here: NY 436385). In 1988, Soják annotated but did not formally publish this specimen as lectotype; his choice is herewith honored and acknowledged. Synonyms include *P. virgulata* A. Nelson (Bull. Torrey Bot. Club 27:265. 1900) and *P. pectinata* Raf., nom. illeg. (Autik. Bot.:164. 1840, non Fisch. ex Ser. in A.P. de Candolle, Prodr. 2:581. 1825). The earlier name *P. dissecta* Pursh (Fl. Amer. Sept. 1:355. 1813) is probably also a synonym but is proposed for rejection (Ertter et al. 2008) since the name has a long history of application to unrelated species. The homotypic names *P. pensylvanica* var. *glabrata* (Lehm.) S. Watson, *P. bipinnatifida* Douglas ex Hook. var. *glabrata* (Lehm.) Kohli & Packer, and *P. glabrella* Rydb. have been applied to this entity or other components of *P. pensylvanica* s.l.; however, the type of the basionym, *P. sericea* L. var. *glabrata* Lehm., belongs to the unrelated species *P. ovina* J.M. Macoun, as noted by Soják (1996: 120).
- Potentilla jepsonii** Ertter, **nom. nov.** BASIONYM: *P. pensylvanica* var. *ovium* Jepson, Fl. Calif. 2:184. 1936; *P. litoralis* var. *ovium* (Jepson) Soják, Thaiszia 16:49. 2006. The epithet "ovina" is replaced at species rank to avoid confusion with *P. ovina*, which has an overlapping range. Of the two sheets in the Jepson Herbarium of the type collection (Jepson 7307), JEPS 2814 is here designated the LECTOTYPE, as the sheet with more abundant material and packeted notes. This sheet has been annotated by E. Crum as type of an unpublished variety of *P. pensylvanica*, using the epithet "decumbens."
- Potentilla bipinnatifida** Douglas ex Hook., Fl. Bor.-Amer. 1:188. 1832. Soják (2008) is proposing to conserve *P. bipinnatifida* against two older names: *P. normalis* Bess. ex Spreng. (Syst. Veg. ed. 16, 4, Cur. Post. 199. 1827) and *P. missourica* Hornem. ex Lindl. (Bot. Reg. 17:1412. 1831).
- Potentilla bimundorum** Soják, Cas. Nár. Mus., Odd. Prir. 141:195. 1974. Soják (1974) described *P. bimundorum* to accommodate all New World and some Old World plants previously placed in *P. multifida* L., which as now circumscribed is confined to the Old World.

III. Lectotypifications and identities of *Potentilla nivea* var. *dissecta* and *P. concinna* var. *divisa*

Potentilla nivea var. *dissecta* S. Watson (Proc. Amer. Acad. Arts 8:559. 1873) was described on the basis of four syntypes: "in the Rocky Mts. of British America and Montana (368 Drummond; Douglas; Howard); and in the Uintas, Utah (335 Watson, in part)." When Rydberg (1896b: 431) proposed "*P. concinna* *divisa* n. v.," he cited *P. nivea* var. *dissecta* "at least in part" in synonymy and included the Douglas ("Rocky Mountains") and Howard ("Montana") syntypes of *P. nivea* var. *dissecta* among the specimens representing his concept of *P. concinna* var. *divisa*. The other collections cited by Rydberg were "South Dakota: Jenney. 1875; W.H. Forwood, 1887; P.A. Rydberg, nos. 672 and 673. 1892. Assiniboia: John Macoun, no. 10,468, 1895."

Rydberg's citation of *Potentilla nivea* var. *dissecta* in synonymy has led to the interpretation that the two names are nomenclatural synonyms, with the epithet *divisa* superfluous at the varietal level (e.g., Boivin 1952, Hitchcock & Cronquist 1961). This interpretation is not supported, however, by Rydberg's use of "in part" and his explicit citation of some of Watson's syntypes to the exclusion of others. Rydberg (1896b) preceded the citation of specimens with the statement that "Dr. Watson included the three first specimens [actually only two, those by Douglas and Howard] cited below in his *P. nivea dissecta*, but in every respect they are much nearer *P. concinna* than *P. nivea*." As proof that Rydberg had two distinct entities in mind, he (1896a: 303) had not only previously cited *P. nivea* var. *dissecta* in the synonymy of *P. nivea* var. *quinquefolia* Rydb., but in his subsequent 1898 monograph of North American *Potentilleae*, he cited *P. nivea* var. *dissecta* "in part" in the synonymy of both *P. nivea* var. *altaica* (Bunge) Rydb. and *P. concinna* var. *divisa*. The Drummond and Watson syntypes of *P. nivea* var. *dissecta*, which were excluded from *P. concinna* var. *divisa*, were instead listed among the specimens seen of *P. nivea* var. *altaica*, preceded by the statement that "Watson's specimens agree exactly with the figure of *P. altiaca* [sic] in Ledebour's Illustrations, and this name is the only one available . . ." (Rydberg 1898: 87). This dual citation was repeated in Rydberg's 1908 revision, in which *P. divisa* (Rydb.) Rydb. was raised to a species and *P. nipharga* Rydb. replaced *P. nivea* var. *altaica*.

With the distinction of *Potentilla nivea* var. *dissecta* and *P. concinna* var. *divisa* established, lectotypification and identity need to be determined for both entities. Rydberg's removal of the Douglas and Howard syntypes from *P. nivea* var. *dissecta* leaves only Drummond 368 and Watson 335 as candidates. Soják has annotated the NY sheet of Drummond 368 as lectotype of *P. nivea* var. *dissecta*; this choice is herewith honored and formalized. The identity of the single small, one-flowered plant is unfortunately ambiguous, with no precise locality to aid identification; because of the subpalmate/subpinnate leaves and short columnar style (ca 1 mm), it is tentatively identified as *P. saximontana* Rydb.

Of the syntypes of *Potentilla concinna* var. *divisa*, first stage lectotypification has been already been effectively accomplished by Holmgren's (1997: 100) statement that Douglas's collection from the Rocky Mountains was designated lectotype by Rydberg (N. Amer. Fl. 22:330. 1908). In that Rydberg only indicated that the Rocky Mountains were the type locality, without actually citing a specific collection, Holmgren's statement serves as an inadvertent lectotypification, without designating which herbarium houses the type. This would be GH 19535, annotated as holotype by B.C. Johnston and cited as such in his (1980:165) unpublished dissertation.

***Potentilla nivea* L. var. *dissecta* S. Watson, Proc. Amer. Acad. Arts 8:559. 1873, not *P. dissecta* Pursh. TYPE:**
"Rocky Mountains of British America," Drummond 368 (LECTOTYPE, designated here: NY!).
= *Potentilla saximontana* Rydb.

***Potentilla concinna* Richardson var. *divisa* Rydb., Bull. Torrey Bot. Club 23:431. 1896. TYPE: Rocky Mountains, Douglas s.n. (LECTOTYPE, 1st stage designated by N. Holmgren, Intermount. Fl. 3a:100. 1997; second stage designated here: GH 19535!).**
= *Potentilla concinna* var. *divisa*

IV. Lectotypification of *Potentilla pseudosericea* Rydb.

Potentilla pseudosericea Rydb. (Mem. Dept. Bot. Columbia Coll. 2:98. 1898) was described on the basis of three syntypes: "Nevada: Shockley, No. 592, 1888. Rocky Mountains: Nuttall; Fremont, No. 218, 1845–7." As noted by Jepson (1936: 184), Shockley 592 is actually from the White Mountains of Mono Co., California, not Nevada. Of the two Shockley collections in GH annotated by Rydberg as "*P. pseudosericea* n. sp.," GH 19583 is labeled in S. Watson's handwriting as originating in Esmeralda Co., Nevada, but with the caveat "I think—ticket lost." The other (GH 19584) bears an original label on which a printed "Esmeralda Co., W. Nevada" is supplanted by Shockley's handwritten "White Mts., Mono Co., Calif., Aug. 19, 1888, W.H. Shockley 592," confirming that the Nevada citation was indeed erroneous.

The Shockley syntype represents the species to which the name has been traditionally applied, endemic to the east-central mountains of California, and possibly Nevada (unconfirmed). In contrast, the Nuttall

and Frémont syntypes belong to an unrelated species, *P. bipinnatifida* Douglas ex Hook. Rydberg (1898) also cited Nuttall's manuscript name "*Potentilla holosericea*" in synonymy and subsequently (Rydberg 1908: 348) specified "Rocky Mountains" as the type locality. This led B.C. Johnston to annotate Nuttall's specimen at NY as lectotype, and to annotate Shockley's "Nevada" syntype (GH 19583) as an unpublished variety of *P. pensylvanica* honoring the collector. However, citation of a locality alone is insufficient for lectotypification (Art. 37.3, Note 2, McNeill et al. 2006), so that effective lectotypification begins with W. Jepson's (1936: 184) citation of "White Mts., Mono Co., Cal., Shockley 592" as type locality. To complete the process, GH 19583 is herewith formally designated the lectotype of *P. pseudosericea*.

Potentilla pseudosericea Rydb., Mem. Dept. Bot. Columbia Coll. 2:98. 1898. TYPE: "NEVADA. ESMERALDA CO." [actually CALIFORNIA. MONO CO.: White Mountains]: 19 Aug 1888, W.H. Shockley 592 (LECTOTYPE, 1st stage designated by W. Jepson, Fl. Calif. 2:184; second stage designated here: GH 19583!; ISOLECTOTYPES: GH 19584, JEPS, UC).

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